when we read that "careful examination of the calices by Dr. Headlee failed to show any spray lodged beneath the stamens or in the calyx cavity proper." An attempt was made to apply Western methods to Eastern conditions, that is to fill the lower calyx cup with poison as the best treatment for the codling moth, but the most essential point was neglected,—the spray was not shot *down* and was not put in the only place where it was needed.

All of which reminds me of the early troubles in the East over the sulphur-lime wash; how the impractical spraying of a couple of entomologists induced a neglect of a tried remedy, known to be completely effective on the Pacific coast, with a consequent ruin of millions of dollars of orchard property. Since, "in a second bulletin from the U. S. Department of Agriculture, the chemical reactions of the wash were set forth and it was shown almost conclusively that sulphur-lime could not reasonably be expected to be of much value in the moist East" (Bull. 37, p. 55, U. S. Bureau of Entomology). This neglect might have continued until today had not Dr. Forbes' experiment of washing off the spray with a pump and yet finding the scale dead, or the successes of a few practical fruit growers awakened official entomologists to the fact that something was wrong. This neglect of the sulphur-lime wash in the East has had an important economic bearing, since probably as much as any one factor it has been responsible for the transfer of interest in fruit growing from the East to the West.

Now, the purpose of this paper is not to antagonize Eastern entomologists, but to call attention to the fact that a most important field is still open for investigation. The success of careful filling of the calyx cup has been too universal in the far West to believe it is inapplicable elsewhere. If some Eastern entomologist will actually spray as we do in this region and give our methods the trial they deserve, the sole purpose of this article will have been accomplished. But an apathy to successful methods if continued will be detrimental to the profession of economic entomology, especially when the insects concerned are as prominent as the San José scale and the codling moth.

REPORT OF THE SIXTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF HORTICULTURAL INSPECTORS

The sixth annual meeting of this association was held at the Windsor-Clifton Hotel, Chicago, Ill., December 27, 1907. Mr. A. F. Burgess, Washington, D. C., presided and Prof. James Troop, La-

fayette, Ind., secretary of the association, was also present. The following twenty-one states were represented by the official inspectors or deputy inspectors: Connecticut, Dr. W. E. Britton; Georgia, Mr. E. L. Worsham; Idaho, Mr. J. R. Field; Illinois, Dr. S. A. Forbes and Mr. J. A. West; Iowa, Prof. H. E. Summers; Kansas, Dr. T. J. Headlee; Louisiana, Prof. Wilmon Newell; Massachusetts, Dr. H. T. Fernald; Maryland, Prof. T. B. Symons; Michigan, Prof. L. R. Taft; Minnesota, Prof. F. L. Washburn; Nebraska, Prof. Lawrence Bruner; New Hampshire, Prof. E. D. Sanderson; New Jersey, Dr. J. B. Smith; New York, Mr. P. L. Heusted; North Carolina, Prof. Franklin Sherman, Jr.; Oklahoma, Prof. John F. Nicholson; Pennsylvania, Mr. E. B. Engle; Tennessee, Prof. H. A. Morgan and Prof. G. M. Bentley; Virginia, Prof. J. L. Phillips; West Virginia, Prof. W. E. Rumsey and Prof. Fred E. Brooks. Official entomologists not directly connected with horticultural inspection work were also present from Alabama, Delaware, Indiana, Maine, Missouri, Ohio and the District of Columbia. The American Association of Nurserymen was represented by its President, Mr. J. L. Hill of Des Moines, Iowa, Prof. John Craig, Ithaca, N. Y., Mr. Orlando Harrison, Berlin, Maryland, and Col. C. L. Watrous, Des Moines, Iowa.

A report was presented by Mr. Orlando Harrison, chairman of the joint committee on national law for the control of introduced insect pests, as follows:

"To the Members of the American Association of Horticultural Inspectors.

"GENTLEMEN: As chairman of the committee on uniform inspection of nursery stock for the American Association of Nurserymen appointed by our president at our last annual meeting, it is a pleasure to say that I sent out about 88 letters to various nurserymen and have received 60 replies, sufficient to indicate that they are desirous of some action being taken along the line of uniform inspection, and from the information gathered, it is safe to say that the majority of nurserymen welcome inspection by the entomologists or by competent assistants, and also by pathologists, and a better understanding is desired on the part of the nurserymen of what is expected of them.

"It was clearly shown in the correspondence which I received that the majority of our nurserymen desire a change in conflicting laws of the various states. They want one inspection, and one certificate which will permit them to ship into the various states.

"It is also clearly shown by their correspondence that something

must be done for their relief, as the excessive amount of red tape is expensive under present conditions.

"I am here to tell you that the nurserymen are anxious to coöperate with you in combating, controlling and stamping out, if possible, the insect pests and diseases that are liable to be found in the nursery. We realize that it is our duty to our customers, and to you horticultural inspectors, as our representatives who issue the certificates, that you be placed in the proper light with each other and with the grower in issuing these certificates from one state to another; but it does seem to us that more attention should be paid by the inspectors to neglected orchards near a nursery, and the various shade, ornamental and fruit trees commonly found in a city or small town near a nursery, and in making your demand on the nurseryman, a similar demand should be made upon the owners of such property. The nursery business is now already overtaxed and we desire coöperation with inspectors in causing such places to be treated or destroyed. We pray you not to overlook the other fellow, just across the fence, who is more dangerous to us than the man who would set fire to our buildings.

"I heartily join in the sentiments expressed by our President, Mr. Hill, this afternoon at the meeting of the entomologists, and my only desire is that you will all actively coöperate in bringing about the desired legislation.

"I would be pleased to see this association endorse the resolutions as presented to the Association of Economic Entomologists this afternoon. I thank you for the opportunity of presenting this matter before you, and hope for your earnest consideration of the same."

This committee also presented, through Dr. S. A. Forbes of Urbana, Ill., the following resolutions, which were the same as those endorsed by the Association of Economic Entomologists, and they were unanimously adopted:

A.—*Resolved*, That the Secretary of Agriculture should be empowered to make regulations governing importations liable to harbor insect pests or plant diseases; to require such importations to be accompanied by the certificate of a duly accredited entomologist of the country in which said shipments originate; or in the absence of such certificate, to make inspection of such shipments, by competent agents, at point of destination and that sufficient appropriation be made for this purpose by Congress.

B.—(1). That Congress be asked to enact a law empowering the Secretary of Agriculture to issue certificates of nursery inspection, as nearly uniform as possible, to all nurseries in the United States engaging in interstate trade, upon proper inspection of such nurseries by duly authorized representatives of the U. S. Dept. of Agriculture or by state officials approved by the Secretary of Agriculture for that purpose, and that sufficient appropriation be made therefor.

(2) That all state or territorial officials in charge of nursery inspection be urged to accept the certificates at their face value, and that in states where laws are now in force which will not allow the acceptance of such certificates, the inspection departments be requested to endeavor to secure such state legislation as will make this possible.

C.—That Congress should authorize the Secretary of Agriculture to proceed to exterminate or control imported insects or plant diseases, or any insect previously native to a restricted locality, but which may become migratory and threaten the whole country, whenever in his judgment such action is practicable, and that an appropriation be made for this purpose as a reserve fund for emergency use against any such pest which may arise.

D.—The joint committee proposes to have two bills prepared for introduction in Congress, one of these embracing the subject matter of sections A and B above, and the other embracing only the subject matter of Section C, and that if the passage of both measures be found impracticable or impossible, then all efforts be concentrated in the attempt to secure passage of the bill involving the certification and inspection of imports and the control of nursery stock shipments entering into interstate trade, as above outlined.

As the authors of papers to be presented at this meeting were absent, the questions for general discussion were considered as follows:

1. Is the method of dipping nursery stock in a contact insecticide as satisfactory as fumigation?

The discussion of this question brought out the fact that in the Northwestern states the dipping of nursery stock for destroying San José scale is considered an efficient remedy. No extensive experiments along this line were reported, showing that this method was more effective than fumigation. After general discussion the consensus of opinion was that fumigation was preferable, and that no harm would result to the trees if the work was properly done.

2. What further precautions, if any, than those employed now can be adopted to prevent the dissemination or injury caused by crown-gall?

This question was thoroughly discussed, but no better plan was proposed than the one now in general use, namely, the destruction of infested trees and plants.

3. What privileges shall be allowed in the purchase and sale of nursery stock known to be scaly by both purchaser and seller?

This question brought out a general discussion and exchange of views from many of the inspectors and entomologists present. The attitude taken on this matter seemed to depend largely on the local conditions. No definite action was taken by the association, but the prevailing sentiment indicated that it was unwise to allow the shipment of stock known to be infested.

The following officers were elected for the ensuing year: President, Prof. H. E. Summers, Ames, Iowa; Vice-President, Prof. F. L.

Washburn, St. Anthony Park, Minnesota; Secretary, Prof. T. B. Symons, College Park, Maryland.

The association then adjourned to meet in joint session with the Association of Economic Entomologists at 10 o'clock the following morning, when papers and discussions of special interest to both associations were presented. The report of the joint session is included in the annual report of the Association of Economic Entomologists.

JAMES TROOP, *Secretary*.

NATIONAL INSECTICIDE BILL

As intimated in the last number of the JOURNAL, measures looking toward the national control of insecticides and fungicides have been introduced into Congress; Senate Bill 6515 by Senator A. B. Kirtledge of North Dakota, and House Bill 21318 by Hon. Frank A. Lowden of Illinois, which bills are practically identical. The Senate bill was referred to the Committee on Agriculture and Forestry, of which Senator H. C. Hansbrough is chairman, and the House bill has been referred to the Committee on Interstate Commerce, of which Hon. William P. Hepburn is chairman. Copies of the Senate bill have been sent to all leading members of the Association of Economic Entomologists, Experiment Station directors, official chemists, manufacturers and others interested in such legislation. From an extensive correspondence, it is very evident that there is a widespread sentiment among the leading manufacturers in favor of such legislation. Several minor amendments to the bills introduced are undoubtedly desirable.

It now seems probable that a conference between the manufacturers, chemists and entomologists will be held in the near future, at which time desirable amendments will be agreed upon. The chairman of your committee begs to request that the entomologists carefully scrutinize this measure and send him any definite suggestions as to desirable amendments. There seems no probability of the measure passing at this session of Congress, but it will undoubtedly be re-introduced next December, and it is urged that it be called to the attention of state and local fruit and truck growers' organizations, and others who would be interested in its passage, and that they be urged to follow the course of this legislation and aid it as much as possible. It seems that its passage will depend very largely upon how much public sentiment is shown in its favor, as we believe that there will not be any serious organized opposition.

E. DWIGHT SANDERSON,
Chairman, Committee on Proprietary Insecticides.